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ABSTRACT

The participants in the Second International Congress on Technical and Vocational Education (TVE), which was devoted to the theme of lifelong learning and training as a bridge to the future, formulated 48 recommendations to the Director-General of the United Nations Educational, Scientific, and Cultural Organization (UNESCO). The recommendations pertained to six broad themes: changing demands of the 21st Century and challenges to TVE; improving systems providing education and training throughout life; innovating the education and training process; TVE for all; changing roles of government and other stakeholders in TVE; and enhancing international cooperation in TVE. The recommendations call for the following: (1) ensuring that TVE be designed to provide skills for all and remain an accessible basic human right; (2) reforming TVE systems to achieve flexibility, innovation, and productivity; (3) forming a new partnership between education and the world of work and fostering development of generic competencies, the work ethic, technological and entrepreneurial skills, and imparting human values and standards for responsible citizenship; (4) designing TVE experiences as developmental life experiences with cultural and environmental aspects in addition to economic dimensions; and (5) reorienting the TVE curriculum to take account of new subjects and issues of importance. (MN)

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ED 433 409

TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING: A VISION FOR THE TWENTY-FIRST CENTURY

Work, Education and the Future

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Recommendations

Second International Congress on Technical and Vocational Education

26 - 30 April 1999
Seoul, Republic of Korea

UNESCO

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FOREWORD

The Second International Congress on Technical and Vocational Education was held by UNESCO in cooperation with the Government of the Republic of Korea in Seoul from 26-30April 1999.Its objective was to provide UNESCO's Member States with a forum to discuss the renovation of national technical and vocational education (TVE) policy to address the employment and other socio-economic challenges of the early years of the twenty-first century.

More than 700 representatives, 39 of whom were Ministers and Vice-Ministers of Education or Vocational Education, from 130 countries, intergovernmental and non-governmental organizations, foundations and industries met to determine how TVE should adapt to the technological developments and social phenomena likely to characterize this era. Their deliberations in plenary sessions, commissions and roundtables were crystallized into a set of recommendations entitled **Technical and Vocational Education and Training: A Vision for the Twenty-first Century.** These recommendations are presented in the following pages clustered under the six themes of the Congress. They are addressed primarily to the Director-General of UNESCO to enable him to design the Organization's programme actions in TVE for the year 2000 and beyond in line with the needs of its Member States. Nevertheless, they have equal relevance for national and institutional initiatives designed to revitalize TVE programmes for the next decade.

The recommendations generated by the Second International Congress on Technical and Vocational Education are being distributed by UNESCO for the benefit of its Member States. National policy- and decision-makers are encouraged to use them as resource material in framing TVE policy and implementing programmes. This material maybe reproduced without restriction provided its source is acknowledged.

Technical and Vocational Education and Training: A Vision for the Twenty-first Century

Recommendations to the Director-General of UNESCO

PREAMBLE

We, the participants in the Second International Congress on Technical and Vocational Education whose theme was Lifelong Learning and Training: A Bridge to the Future, meeting on the eve of a new century and millennium in Seoul, the capital of the Republic of Korea, a country that epitomizes the contribution of education to social and economic progress, have had the opportunity to work together in plenary sessions, commissions, round tables and forums, to contribute to a world vision and programme for technical and vocational education and training (TVET) for the first decade of the new millennium.

We have considered the emerging challenges of the twenty-first century, a century that will be an era of knowledge, information and communication. Globalization and the revolution in information and communication technology have signalled the need for a new human-centred development paradigm. We have concluded that technical and vocational education (TVE), as an integral component of life-long learning, has a crucial role to play in this new era as an effective tool to realize the objectives of a culture of peace, environmentally sound sustainable development, social cohesion and international citizenship.

Mindful of the opportunities that lie ahead of us and those which will progressively unfold, and cognizant of the policies, partnerships and resources needed to raise the status and broaden the traditional vision of Technical and Vocational Education, and recognizing the need for strengthened international partnerships particularly to address the needs of developing countries, we are forwarding the following recommendations to the Director-General of UNESCO and requesting him to submit them to the next session (30th) of the Organization's General Conference in view of its intention to launch a new global strategy for Technical and Vocational Education.

Theme 1

The Changing Demands of the Twenty-first Century: Challenges to Technical and Vocational Education

1.1 The twenty-first century will bring a radically different economy and society with profound implications for technical and vocational education (TVE). TVE systems must adapt to these key features which include globalization, an ever-changing technological scenario, the revolution in information and communications, and the consequent rapid pace of social change. The implications of these transformations include the increased mobility of labour and capital, uneven impacts upon rich and poor, and emerging market economies in both rural and industrial sectors. The knowledge-based society which these changes are bringing offers exciting new modalities for education and training.

1.2 These social and economic trends predicate the need for a new development paradigm which holds a culture of peace and environmentally sound sustainable development as its central features. Accordingly the values, attitudes, policies and practices of TVE must have their foundations in this paradigm which will encompass inclusiveness and wider access, a shift to human development needs and empowerment for effective participation in the world of work. Its focus must be on the needs and potential of the individual in society. TVE has a crucial role to play in this new paradigm by providing skills for all and should include the poor, the excluded and the unreached so that education remains an accessible basic human right. The universalization of TVE and the learning skill it imparts would enhance access to education for all citizens of the world. A new holistic approach is required so that education for the twenty-first century will include all domains of learning incorporating general and vocational education to enable the learner of the twenty-first century to launch into a lifelong continuum of knowledge, values and attitudes, and competences and skills. The ultimate goal of such an approach would be the creation of a learning society.

1.3 TVE systems must therefore be reformed to give life to this new paradigm by achieving flexibility, innovation and productivity, imparting the skills required, addressing the implications of changing labour markets, training and retraining the employed, unemployed and the marginalized with the

objective of achieving equality of opportunity for all in both the formal and informal sectors of the economy.

1.4 There must be a new partnership between education and the world of work to address the need to develop a synergy between the sectors of education and industry and the various other economic sectors,to foster the development of generic competences, the work ethic, technological and entrepreneurial skills, and for imparting human values and standards for responsible citizenship.

1.5 There is a need to introduce the required changes in a manner suitable for each country so as to empower and engage human beings in the context of the new paradigm with TVE as a common key focus of the reform process.

1.6 The prerequisites of the TVE response to the new paradigm include appropriate societal values and attitudes, embracing the new technologies, making new policy and financial commitments,and taking account of local, regional, and global opportunities and concerns. The sheer magnitude of the trends of the twenty-first century demands a political commitment and bold policy responses which are both regional and international.

Theme 2

Improving Systems Providing Education and Training Throughout Life

2.1 Lifelong learning is a journey with many pathways and TVE is an integral part of the voyage. Therefore TVE systems should be designed as developmental life experiences with cultural and environmental aspects in addition to their economic dimensions.

2.2 To make the maximum contribution to lifelong learning TVE systems need to be open, flexible and learner-oriented. They must do more than just provide the learner with knowledge and skills for specific jobs. They must also prepare individuals more generally for life and the world of work. TVE is for personal, social and economic benefit.

2.3 TVE needs to be based on a learning culture shared by individuals, industry, different economic sectors and government in which individuals are empowered to take progressively more responsibility for their own knowledge-management and independent learning while public and private providers ensure programmes that facilitate access to and through the pathways of lifelong learning.

2.4 TVE has an important role in reducing levels of anxiety in the midst of constant uncertainty by providing information and knowledge, skills and competences,entrepreneurial capacity and the development of the human personality.

2.5 All nations require a coherent education policy and coordinated education systems within which TVE must be a fundamental part. TVE should develop close interfaces with all other education sectors, particularly schools and universities, to facilitate seamless pathways for learners. The emphasis must be on articulation, accreditation and recognition of prior learning to enhance their opportunities. Within this spectrum TVE has a responsibility to ensure a sound initial education and training aimed at learning to learn, the most precious skill for all citizens both young and adult.

2.6 Perhaps the biggest challenge that faces TVE is to coordinate the needs of a general and a vocational education through curriculum, pedagogy and delivery. Each country will wish to pursue its preferred approach to coordinate these domains but it is clear that the demands of the twenty-first century require new synergies between these fundamental pillars of education and training systems.

2.7 TVE should inspire in young people a positive attitude to innovation, enable them to help shape change and prepare them for self-reliance and citizenship.

2.8 TVE is particularly important in ensuring a seamless transition from the school to the workplace. To achieve this it needs an holistic approach which captures the dichotomies of the academic and the vocational, the theory and the applied, knowing and doing, the use of the head and the hand. This requires effective partnerships with schools and with industry and other economic sectors which embrace shared values, shared curriculum, shared resources and shared outcomes.

2.9 The informal economic sector is often excluded in the spectrum of life-long learning. TVE has a vital role to play in reaching out to this sector in

every way possible to ensure that the less privileged have access to the pathways of continuous learning. This applies with equal force to those who drop out of the formal cycle of education.

2.10 To achieve all of these aspirations for TVE a number of urgent considerations must be addressed:

- the status and prestige of TVE must be enhanced in the eyes of the community and the media. This includes raising the status of teachers in TVE systems through attention to their own skills and competences and the provision of resources for their task. It will also require strong marketing of the capabilities of TVE to its many stakeholders accompanied by a simplification of TVE in the minds of many who find its language, its products and its modalities too complex. Publicizing and disseminating models of good practice in TVE are also important. There is a need to promote parity of esteem between vocational and general education, especially in developing countries;

- the sectors of education must achieve more effective interrelationships to facilitate more seamless pathways for learners. They do not need to be homogenized; each sector can retain its identity and they all can recognize each other's passports and visas at their borders;

- there must be flexibility in programme administration and curriculum design to facilitate a smooth passage through lifelong learning and provide continuous entry, exit and re-entry points;

- career guidance and counselling are of the utmost importance for all clients of the education and training systems and need to be significantly strengthened. Career guidance should take into account the needs of industry, the individual and the family and be sensitive to each learner's requirements and circumstances. Its role should be extended to prepare students and adults for the real possibility of frequent career change which could include periods of unemployment and employment in the informal sector. It should not only be a recognized function of educational institutions but should also be provided at other venues accessible to the population at large;

- all stakeholders, particularly industry and educationalists, must be involved in new TVE partnerships. Each has much to learn from the other in approaches to lifelong learning;

- the high cost of many TVE programmes must be addressed. They should be redesigned to incorporate more workplace learning;
- the lifelong learning continuum will be best sustained if there is a diversity of funding, a diversity of providers and a diversity of delivery mechanisms. Innovative approaches to flexible delivery of TVE including the use of information and communication technology and distance learning should be particularly welcomed;
- quality assurance is essential to ensure a new higher status for TVE. Qualification standards, certification processes, valid assessment methods and acceptable outcomes are all key ingredients and should be the hallmarks of all TVE systems;
- We need to understand more about the critical moments of choice on the journey of lifelong learning. More research should be encouraged to help understand the key issues, dilemmas, potential barriers and opportunities which confront the voyager at the various phases of the journey. More longitudinal studies would be of significant benefit in this regard.

Theme 3

Innovating the Education and Training Process

3.1 The challenges facing the learner of the twenty-first century demand innovative approaches in TVE. This is seen most clearly in the need for a re-oriented curriculum to take account of new subjects and issues of importance. Obvious examples would include technology, the environment, understanding foreign languages and cultures, entrepreneurial capacity and the requirements of the rapidly growing service industries connected with leisure, tourism and hospitality.

3.2 The rapid pace of change also introduces the prospect of a virtual curriculum whereby learners must be prepared to cope with the obsolescence of their knowledge and skills, and the introduction of new elements which have yet to appear in common usage. They must also be prepared for a radically new labour market in which traditional wage-employment may be the experience of only a minority and

self-employment in various forms may offer a high potential for economic independence in a new era of entrepreneurship.

3.3 The new information technology has opened up a whole new potential in technology-based learning.It should be possible to use and apply simple as well as modern technology and the new information and communication technologies in the TVE teaching and learning process without losing the valuable aspects of traditional teaching methods particularly the personal nature of the teacher-learner relationship. Technology-based learning should play a crucial role in the development of a culture of lifelong learning with the capacity to empower learners by providing them with multiple new pathways to meet their education and training needs.

3.4 The new technologies must be harnessed to provide widespread access to TVE. They should be used to make distance irrelevant and to render curriculum-based knowledge and vocational guidance information more easily accessible to all.They have the potential to offer flexibility in time and location to TVE delivery and should enable TVE to function as a catalyst for the penetration of new technologies in underdeveloped regions of the world, particularly in rural areas.

3.5 As the workplace calls for more sophisticated skills, a sound basic education must be provided as a prerequisite foundation for TVE. This should involve the acquisition of more complex competences in school, including enhanced literary and numeracy skills and the ability to understand and communicate through the tools of modern technology.

3.6 Since technology comes at a price, ways must be found through partnerships with industry, financial and aid agencies and regional and international cooperation to address the high costs involved, especially for developing countries.New ways must also be found to share intellectual property for the benefit of learners in all countries and situations.

3.7 Given the essential need for innovation in TVE, the role of the teacher remains paramount.New methods must be found for the initial training of teachers accompanied by the continuous upgrading of their competences and professional development.A rethinking must take place as to the qualifications required of the TVE teacher of the twenty-first century, including the optimum balance of training acquired on the campus and in the work place.They must be assisted to develop new and appropriate instruments of assessment, accreditation, articulation and certification standards.

3.8 TVE needs an early global warning system and more futuristic studies to enable preparation for changes in the work place and in society. Industry must be involved with governments and research centres in identifying the knowledge, skills and competences which will be required by the changing economy so that TVE systems can adapt. The prospect of competences applicable across regions and internationally should be addressed to respond to the projected escalation in resource mobility in the next century.

Theme 4

Technical and Vocational Education for All

4.1 TVE is one of the most powerful instruments for enabling all members of the community to face new challenges and to find their roles as productive members of society. It is an effective tool for achieving social cohesion, integration and self esteem.

4.2 TVE programmes should be designed as comprehensive and inclusive systems to accommodate the needs of all learners; they must be accessible to all. Special efforts are needed to reach previously marginalized groups. Where specialized programmes are required, these should be designed to facilitate entry into the mainstream, thus ensuring continued access to life-long learning.

4.3 The list of recognized marginalized groups is long and is certain to grow to include others which are yet unknown. TVE programmes, both formal and non-formal, must be made available in varying modes of accessible delivery to the unemployed, early school leavers, out of school youth, those disadvantaged by distance and location, rural populations, indigenous people, those in the midst of urban despair, populations engaged in informal labour markets with poor working and living circumstances, children working under hazardous conditions, refugees, migrants and demobilized soldiers in post-conflict situations.

4.4 The underrepresentation of women in TVE is of particular concern. Traditional perceptions of appropriate roles for men and women in the

work place should be challenged.TVE must respond with gender-inclusive learning programmes, both in content and delivery, including measures to attract men into previously female-dominated training and careers.Faculty need to be gender-sensitive.

4.5 For the promotion of equal access of girls and women to TVE courses, more effective forms of educational and vocational guidance and counselling must be provided along with gender-sensitive guidance and counselling materials. At the same time the learning and working environments must be made more suitable for the participation of girls and women, overt and covert bias and discrimination must be removed and a positive image and appropriate incentives for female participation in TVE should be created.

4.6 To overcome the lack of employment opportunities for girls and women and the misconception that they are incapable of performing particular tasks,TVE programmes emphasizing the development of their entrepreneurial capacity should be undertaken.

4.7 The journey through lifelong learning is burdensome for the disabled; the pathways are very rocky and difficult to negotiate.Their aspirations and achievements must be broadened. People with disabilities frequently have difficulty accessing TVE for a range of reasons.These include the underestimation of educators and vocational guidance personnel of the ability and potential of people with disabilities to take up competitive paid employment. Those who are able to join mainstream TVE programmes should be assisted to do so while those with more severe disabilities should be provided with special programmes and learning strategies to realize their potential and optimize their participation in society and the work force.

4.8 The commitment to TVE for all requires well designed policies and strategies, increased resources, flexible and appropriate delivery modes,friendly training environments and sensitive and caring teachers and employers.

Theme 5

Changing Roles of Government and Other Stakeholders in TVE

5.1 Although governments carry the primary responsibility for TVE, in a modern market economy TVE policy design and delivery must be achieved through a new partnership between government, employers, vocations, industry, trades union and society. This partnership must create a coherent legislative framework to enable the launching of a national strategy for change. Within this strategy the government, apart from actually providing TVE, can fulfil the roles of giving leadership and vision, facilitating, coordinating, establishing quality assurance and ensuring that TVE is for all through identifying and addressing community service obligations. The capacities of the partnerships must be enhanced through training schemes and facilities to impart appropriate skills.

5.2 The new partnership should aim to establish a learning culture throughout the society whilst strengthening the economy, achieving social cohesion, helping to maintain cultural identity and diversity and the enhancement of humanity. Training for all occupations directly related to human development should include human rights and responsibilities. The learning culture should enable the establishment and maintenance of an institutional structure which will achieve lifelong learning, wider participation in education and training and foster the work ethic with a revitalized spirit of entrepreneurship.

5.3 Both the monetary and non-monetary benefits of TVE should be recognized by government, industry and other stakeholders.

5.4 The contribution of the voluntary and NGO sectors to the provision of TVE must be recognized and supported because it constitutes an extremely valuable but often overlooked resource.

5.5 Government and the private sector must recognize that TVE is an investment, not a cost, with significant returns including the well-being of workers, enhanced productivity and international competitiveness. Therefore funding for TVE must be shared to the maximum extent possible between government, industry, the community and the learner. There are also opportunities for fund-raising and income-generating activities through

collective effort. The mix will vary for each country, but it is important to realize that the benefits of TVE are for all of the partners in society who should therefore take the responsibility to contribute to the creation and ongoing vitality of their TVE system through cost sharing mechanisms that incorporate appropriate government financial incentives.

5.6 A vibrant economy is best served by a diversity of public and private providers of TVE operating in healthy competition within a national framework of quality assurance. The balance can be struck in many ways but the government should assume responsibility for ensuring strong basic initial vocational preparation no matter which sector is providing its delivery. Government should also be considered a provider of last resort to ensure that potentially excluded populations are not overlooked and are ensured access to TVE programmes. There is a particular need in all countries to expand employment-based training which is well articulated with institutional training through a national framework which includes individual learning credit banks and records, and multiple and flexible entry and exit points. The private sector has a particularly important role to play in this regard.

5.7 Within governments there are often shared and overlapping responsibilities for various elements of TVE amongst departments and agencies. It is desirable that governments streamline their own public institutional framework to the maximum extent possible to coordinate the national TVE effort, create an effective partnership with the private sector and promote TVE for the benefit of all stakeholders.

5.8 All TVE partners will be required to increase constantly their knowledge and expertise in many areas affecting TVE systems. Effective mechanisms must therefore be established to share experience and expertise through ongoing research of particular relevance for key policy issues. Other approaches may include jointly shared data banks, multi-media technologies and regional and international cooperation.

5.9 There is significant scope for countries to share their experience with the design and operation of national TVE policies and strategies, and appropriate public and private roles and partnerships. In this regard there is a need for mutual and cooperative assistance between developing and developed countries and those countries with emerging market economies.

Theme 6

Enhancing International Cooperation in TVE

6.1 There is an urgent need for more financial and technical support from international agencies for education, and technical and vocational Education in particular, to allow TVE to contribute more significantly to economic and social development.

6.2 Further co-operation is encouraged between UNESCO and its international partners such as the ILO, The World Bank and the Regional Development Banks, OECD, the European Union and CEDEFOP, the European Training Foundation, ISESCO, the Commonwealth, La Francophonie etc. to enhance TVE, with UNESCO assuming a coordinating role through its comparative advantage in the various fields of education.

6.3 There should be increased cooperation between the North and the South, as well as between countries of the South, to renovate and sustain TVE systems including through research and development.

6.4 The needs of developing countries require specific recognition, particularly in areas such as investment in TVE, the provision of basic education including literacy and numeracy skills to facilitate access to TVE, the encouragement of ownership of TVE and the increase of their budget for TVE.

6.5 International financial authorities must recognize the contribution of education, and particularly TVE, to the maintenance of peace and stability and in preventing social dysfunction and should incorporate the support of TVE in their conditions for assistance to recipient countries.

6.6 UNESCO's efforts to develop a strategy for TVE for the first decade of the twenty-first century are strongly supported. The UNEVOC network should be strengthened. Member States are encouraged to continue to underpin regional and national centres which are essential vehicles for the achievement of the new vision for TVE in the twenty-first century. The Congress strongly recommends that UNESCO increases significantly the budgetary allocation for its TVE programme activities to ensure the successful implementation of the new strategy. To encourage such a revitalization of TVE in the new century UNESCO should also consider the establishment of an international prize for innovation in TVE.

6.7 In the light of the new expanded vision for TVE, which has been endorsed at this Congress and which stresses the need for incorporating a new relationship between the various sectors of education and training, an holistic approach to the preparation for life and the world of work and increasingly seamless pathways in lifelong learning, the Congress recommends that the Director-General of UNESCO, in close collaboration with the ILO, develops a common concept of **Technical and Vocational Education and Training (TVET)** to guide the UNESCO strategy for the twenty-first century.

All participants and observers at the Second International Congress on Technical and Vocational Education unanimously express their profound appreciation to the Government and the people of the Republic of Korea and to UNESCO for hosting and organizing this event which was a crucial milestone in the development of UNESCO's new vision for the contribution of technical and vocational education and training to lifelong learning in the new millenium.

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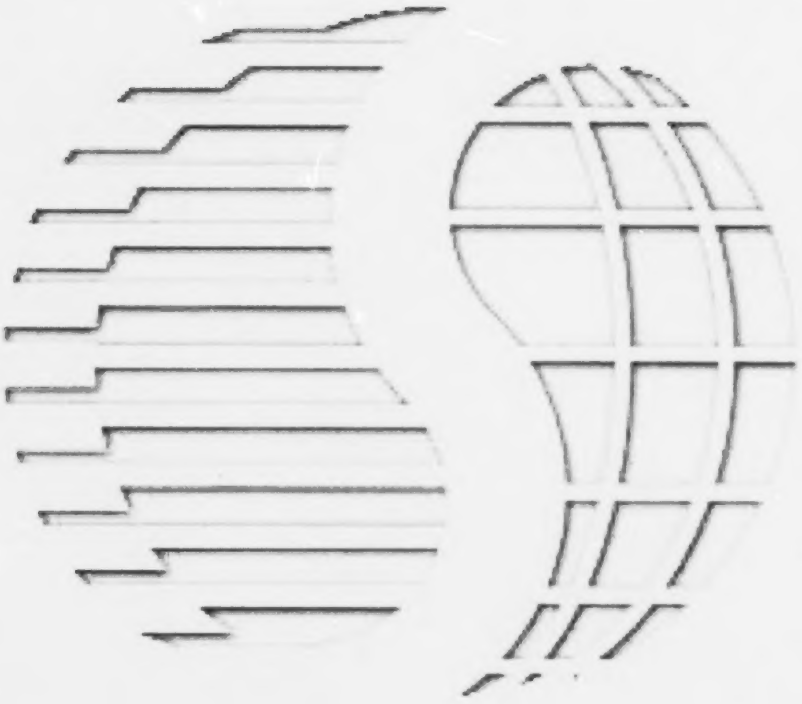

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